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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,305	09/10/2004	Sylvia Krich	2004-1436A	4416
513 7590 01/23/2007 WENDEROTH, LIND & PONACK, L.L.P. 2033 K STREET N. W. SUITE 800 WASHINGTON, DC 20006-1021			EXAMINER OH, TAYLOR V	
			ART UNIT 1625	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/507,305	Applicant(s) KRICH ET AL.	
	Examiner Taylor Victor Oh	Art Unit 1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/10/04</u> . | 6) <input type="checkbox"/> Other: _____ |

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The Status of Claims

Claims 1-10 are pending.

Claims 1-10 are rejected.

DETAILED ACTION

Priority

I It is noted that this application is a 371 of PCT/EP03/02407 (03/10/03), which has a foreign priority document, Austria A 523/2002 (04/04/02).

Drawings

II None.

DETAILED ACTION

Claim Objections

Claim 8 is objected to because of the following informalities:

In claim 8 , the phrases " the process of claim 7 "and " according to claim 5" are recited. The dependent claim should not be dependent on two different claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4, 9 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 4 and 10, the phrases "from the group of methyl tert-butyl ether, diethyl ether, tetrahydrofuran, dioxane, ethylene glycol dimethyl ether, toluene, hexane, heptane, dichloromethane or chlorobenzene", "from the group of hexane, heptane, toluene, ethers or esters" are recited.

They are vague and indefinite because the term "or" would mean that there were some additional components present in the group, but those are unspecified in the closed Markush group limitation. The examiner recommends to change "or" to "and".

Therefore, an appropriate correction is required.

In claim 9, the term "sufficient" is recited. This is vague and indefinite because the specification does not elaborate what is meant by the term "sufficient". Therefore, an appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 7 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated clearly by Covers et al (EP0075356).

Covers et al discloses the preparation of 2,2-dichlorophenylacetic acid esters in the following example(see pages 2-3, example I):

Example I

A flask having a capacity of 250 ml, provided with baffle plates, stirrer, thermometer and gas inlet tube, is filled with 11.3 g 2,2-dichlorophenylacetonitrile, 47 g methanol and 4.4 g water. The mixture is cooled to 10°C and then saturated with hydrogen chloride gas. During the introduction of the hydrogen chloride gas, the mixture is kept, by cooling, at a temperature of about 20°C. After the introduction of hydrogen chloride gas for about 1 hour, the reaction mixture is allowed to react further at about 25°C for 3 hours more.

The reaction mixture obtained is subsequently poured out into 0.5 l water and the aqueous solution obtained is extracted with ether. The ether extract is neutralized with a sodium-bicarbonate solution to pH=8 and then dried with magnesiumsulphate.

After evaporation of the ether, 10.7 g product remains which, according to a gas-chromatographic analysis, contains 84% by wt. methylester of 2,2-dichlorophenylacetic acid (boiling point 95°C/133 Pa) and 15% by wt. 2,2-dichlorophenylacetamide. The melting range of this amide is 111—112°C.

The yield of ester is 68% of the yield theoretically possible.

This is identical with the claims.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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1. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Covers et al (EP0075356) in view of Castelijns et al (EP 0518412).

Covers et al discloses the preparation of 2,2-dichlorophenylacetic acid esters in the following example(see pages 2-3, example I):

Example I

A flask having a capacity of 250 ml, provided with baffle plates, stirrer, thermometer and gas inlet tube, is filled with 11.3 g 2,2-dichlorophenylacetonitrile, 47 g methanol and 4.4 g water. The mixture is cooled to 10°C and then saturated with hydrogen chloride gas. During the introduction of the hydrogen chloride gas, the mixture is kept, by cooling, at a temperature of about 20°C. After the introduction of hydrogen chloride gas for about 1 hour, the reaction mixture is allowed to react further at about 25°C for 3 hours more.

The reaction mixture obtained is subsequently poured out into 0.5 l water and the aqueous solution obtained is extracted with ether. The ether extract is neutralized with a sodium-bicarbonate solution to pH=8 and then dried with magnesiumsulphate.

After evaporation of the ether, 10.7 g product remains which, according to a gas-chromatographic analysis, contains 84% by wt. methylester of 2,2-dichlorophenylacetic acid (boiling point 95°C/133 Pa) and 15% by wt. 2,2-dichlorophenylacetamide. The melting range of this amide is 111—112°C.

The yield of ester is 68% of the yield theoretically possible.

However, the instant invention differs from the prior art in that the chlorination of phenylacetonitriles for benzyl cyanide is not disclosed.

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Castelijns et al discloses the chlorination of phenylacetonitriles for benzyl cyanide using chlorine gas in the following example (see col. 8, example V):

80 grams of benzyl cyanide (89%; 0.68 mole) is introduced into a cylindrical reaction vessel with a volume of 250 ml, fitted with 4 baffles, a stirrer, a reflux condenser and two gas feed tubes. The reaction vessel is then purged using N_2 .

The reactor contents are heated to $40^\circ C$, after which dry HCl gas is introduced in 45 minutes, at a rate of 8-9 litres/hour. Then the supply of Cl_2 gas at a rate of 6-7 litres/hour is started. The chlorination reaction starts up immediately. The temperature of the reaction mixture is maintained at $40^\circ C$. After 4 hours slipthrough of Cl_2 gas is observed and the supply rate of the Cl_2 gas is reduced to 1 litre/hour.

The development of the reaction is followed by analysing samples taken in time by means of GC. After 1 hour, 3 hours and 5 hours the degree of conversion of the benzyl cyanide is 24%, 73% and

85%, respectively. The benzyl cyanide is converted virtually quantitatively into α,α -dichlorobenzyl cyanide.


Covers et al expressly discloses the preparation of 2,2-dichlorophenylacetic acid esters by reacting 2,2-dichlorophenylacetonitrile with water and an alcohol in the presence of hydrogen chloride gas, whereas Castelijns et al does disclose the chlorination of phenylacetonitriles for benzyl cyanide using chlorine gas and hydrogen chloride gas. Both processes are related as mutually inclusive species in an intermediate-final product relationship. Therefore, it would have been obvious to the skilled artisan in the art to be motivated to apply Castelijns' et al chlorination method to the Covers et al process. This is because the skilled artisan in the art would expect such a combination to be successful and economical as shown in the prior art.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas McKenzie can be reached on 571-272-0670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Taylor Victor Oh, MSD,LAC
Primary Examiner
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1/18/07